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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/747,605

12/29/2003

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7590 02/05/2007
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EXAMINER

BUI PHO, PASCAL M

ART UNIT

PAPER NUMBER

2878

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

02/05/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/747,605

Applicant(s)

BRICKEY ET AL.

Examiner

Pascal M. Bui-Pho

Art Unit

2878

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 13-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 13-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 November 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

This Office action is responsive to communications filed on 16 November 2006.

Presently, claims 1-10 and 13-29 remain pending.

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 17 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Herein, it is unclear how a light-emissive element attached to a patterning layer (as shown in Fig. 2 of the present application), constituting the indicator element, can emit light on the *exterior* of the indicator element.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 6, 7, 10, 15, 18, 28, and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Gordon et al. (US 5,432,339).

With regards to claims 1, 6, 7, 10, 15, and 18, Gordon et al. disclose in Fig. 1 a timing

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device comprising: an indicator device (36, 40) in a disk (arcuate shape) and detectors (38, 42, 44, 50, 52) sensitive to a wavelength of light emitted by the device, wherein said indicator device comprises the combination of a pulsating light-emissive element (36) and a patterning layer (40) patterned with a timing device encoder pattern wherein said indicator moves relative to said detector.

With regards to claims 28 and 29, Gordon et al. disclose a timing device wherein said indicator device (36, 40) has an angle of view of between 5 and 15 degrees (generally depicted in Fig. 44).

6. Claims 1, 6, 7, 9, 13-19, 21, 22, 24, 28, and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Oshima et al. (US 5,932,139).

With regards to claim 1, Oshima et al. disclose in Figs. 44-46 a timing device comprising an indicator device (80) and a detector (104) wherein said indicator device comprises the combination of a light-emissive element (84, 90, 91) and a patterning layer (88) patterned with a timing device encoder pattern wherein said indicator device moves relative to said detector device using transport (92) and rollers (99).

With regards to claim 6, Oshima et al. disclose a timing device wherein said detector is sensitive to the wavelength of light emitted by said light-emissive element (Column 59, lines 28-61).

With regards to claim 7, Oshima et al. disclose a timing device wherein said light-emissive element emits light in pulses since excitation light (101) emits light in pulses (Column 31, lines 45-51).

With regards to claim 9, Oshima et al. disclose a timing device wherein said light-emissive element emits light in greater than 1 wavelength (pulsating) and said detector is capable of sensing more than 1 wavelength (Column 31, lines 45-51; Column 59, lines 28-61).

With regards to claim 13, Oshima et al. disclose a timing device wherein said timing device is provided with a shield (107) that only allows the detector to receive light from a small portion of said indicator device.

With regards to claim 14, Oshima et al. disclose a timing device wherein said timing device is provided with light focusing or directing lenses (103, 108).

With regards to claim 15, Oshima et al. disclose a timing device wherein said indicator element is in an arcuate (circular) shape (Column 41, lines 6-25).

With regards to claim 16, Oshima et al. disclose a timing device wherein said indicator element is in a tubular shape, one of ordinary skill in the art would recognize a disc having a thickness as a tube (Column 41, lines 6-25).

With regards to claim 17, as understood, by the Examiner, Oshima et al. disclose a timing device wherein said indicator element is in a tubular shape with the light-emissive element emitting light on the exterior (top) surface of the tube (Column 41, lines 6-25).

With regards to claim 18, Oshima et al. disclose a timing device wherein said indicator element is in a disk (Column 41, lines 6-25).

With regards to claim 19, Oshima et al. disclose a timing device wherein said indicator element is in a strip (Fig. 45).

With regards to claim 21, Oshima et al. disclose a timing device wherein said patterning layer comprises a pattern formed by a dye transfer image (Column 40, lines 22-27).

With regards to claim 22, Oshima et al. disclose a timing device wherein said patterning layer comprises a pattern formed by ink jet printing (Column 32, line 48 – Column 34, line 38).

With regards to claim 24, Oshima et al. disclose a timing device wherein said patterning layer comprises a pattern formed by conductive inks, elements such as Al and Fe are known in the art to be conductive (Column 36, line 58 – Column 37, line 53).

With regards to claims 28, Oshima et al. disclose a timing device wherein said indicator device has an angle of view of between 1 and 50 degrees (Fig. 44).

With regards to claim 29, Oshima et al. disclose a timing device wherein said indicator device has an angle of view of between 5 and 15 degrees (Fig. 44).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2-5, 8, 20, 22, 23, and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gordon et al. (US 5,432,339).

With regards to claims 2, 3, and 8, Gordon et al. disclose in Fig. 1 a timing device comprising a light-emissive element (36), but lack a clear disclosure of said element being an electroluminescent material, an organic light-emitting diode, and/or pixels. At the time of the invention, however, selecting a particular light-emissive element is well-known. Therefore, it would have been obvious to one of ordinary skill in the art to modify Gordon et al. by selecting

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an electroluminescent material, an organic light-emitting diode, or pixels as the light-emissive element, in order to provide a long lasting life of the light source.

With regards to claims 4, 5, and 26, Gordon et al. disclose a timing device comprising an indicator (36, 40) with inherent bending stiffness, radius, and density. One of ordinary skill in the art would recognize that such properties exist in all timing devices. Gordon et al. however lack a clear disclosure of a desired bending stiffness, radius, or density. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955), the court held that “[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation”. Hence, it would have been obvious to one of ordinary skill in the art to modify Gordon et al. by selecting an optical and/or desired bending stiffness, radius, and density, in order to provide optimal performance and detection.

With regards to claims 20, 22, 23, 25 and 27, Gordon et al. disclose a timing device comprising a patterning layer (40), but lack a clear specification/method of forming said layer. At the time of the invention, however, selecting a particular mean and/or method of forming a patterning layer is well known. Therefore, it would have been obvious to modify Gordon et al. and select a desired method of forming a patterning layer in order to provide a optimal quality of the design of the system, if so desired.

Response to Arguments

9. Applicant's arguments with respect to claims 1-10 and 13-29 have been considered but are moot in view of the new ground(s) of rejection to Gordon et al. (US 5,432,339).

Furthermore, Applicant's arguments to Oshima et al. (US 5,932,139), filed 16 November 2006, have been fully considered but they are not persuasive.

In the submitted arguments, Applicants argue that none of the previously applied references, namely, Oshima et al. (US 5,932,139), Fukuda et al. (US 2003/0040346), and Borza (US 5,920,384), anticipate a *timing device* comprising a detector and an indicator device, wherein the indicator is the combination of a light emitting element and a patterning layer patterned with a *timing device encoder pattern*. Examiner respectfully disagrees. Herein, in its broadest reasonable interpretation, the limitation “timing device encoder pattern” has been translated to equate “a timing device encoder like pattern”. More specifically, a timing device encoder pattern is known in the art to include a black and white pattern/code to represent information. Similarly, a bar code pattern is also known to include a black and white pattern to represent information. Therefore, as explained, one of ordinary skill in the art may deem the black and white pattern used in a barcode as a timing device encoder pattern. The rejection set forth above with regards to the Oshima et al. reference is hence deemed proper.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

I) Arai (US 6,907,794) discloses a torque measuring apparatus includes a rotor having a hollow body portion formed between a drive-side flange portion and a load-side flange portion. Light emitting elements are disposed on a periphery of the rotor, for emitting optical signals based on an output from a torque detection unit.

II) Kucher (US 6,147,342) discloses an encoding system for determining the position for a cylinder rod along a path of movement, the encoding system including a sequence of code segments located on the road along the path of movement.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Telephone/Fax Information

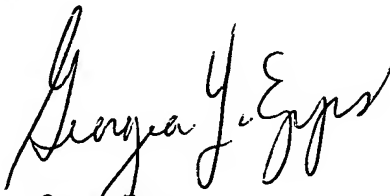
12. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Pascal M. Bui-Pho whose telephone number is (571) 272-2714. The Examiner can normally be reached on Monday through Friday: 8:30 a.m. - 5:00 p.m.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Georgia Epps can be reached on (571) 272-2328. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Pascal Bui-Pho
Examiner, Art Unit 2878
22 January 2007



Georgia Epps
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